



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,180	11/12/2003	Georg Scholz	DKT02151	6126

" 7590 07/26/2005

Borg Warner Inc.
Patent Department
Powertrain Technical Center
3850 Hamlin Road
Auburn Hills, MI 48326-2872

EXAMINER

VERDIER, CHRISTOPHER M

ART UNIT PAPER NUMBER

3745

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,180

Applicant(s)

SCHOLZ ET AL.

Examiner

Christopher Verdier

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4-13-05, 5-6-05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8, 9, 15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 5 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-13-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 3745

Applicants' Amendments dated April 13, 2005 and May 6, 2005 have been carefully considered but are non-persuasive. The abstract has been amended to overcome the objections set forth in the first Office action, but contains an informality. The specification has been amended to overcome the informalities set forth in the first Office action. The claims have been amended to adopt the examiner's suggested claim language, and to overcome the claim objections and the rejections under 35 USC 112, second paragraph set forth in the first Office action. Correction of the above matters is noted with appreciation.

Concerning French Patent 1,442,174, Applicants have amended claim 1 to recite that the crank part has an opening in which the drag lever is slidably guided, and have argued that this defines over the French Patent '174. More specifically, Applicants have argued that according to the German Patent 1,502,527 which is a family member of the French Patent 1,442,174, the blade shaft 10 has a blade of the variable nozzle on one end, with the other end being fixedly connected to a pivot lever 16, and that in addition to the pivot lever fitting tightly in the bore 20, there are locking elements for preventing movement of the pivot lever in the bore, with the last sentence indicating that the pivot lever 16 may be fixed to the vane shaft via a threaded nut. These arguments are not persuasive, because the vane shaft 11 of the French Patent '174 has a crank part 10, with the crank part having an opening 20 in which a drag lever 16 is slidably guided, during initial assembly of the drag lever to the opening. The drag lever 16 is pivotably guided on associated ring 19, with the drag lever immersing into the opening 20 of the crank part in an approximately radial direction. Applicants' arguments on page 12, lines 6-20 of the Remarks section are that the French Patent '174 is an inferior design, in assembly, hysteresis,

Art Unit: 3745

moments, and friction characteristics, and that in the instant application, maximum surface pressure of the dragged lever 17 to the inner surface of the opening and vice versa is relatively small so that wear is small and reliability in operation is high, with surface pressure always being exerted at least approximately perpendicularly to the respective surface, with no one-sided loads occurring. These arguments are not persuasive because the claims do not recite these features, and these are only directed to alleged benefits of the instant application. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to Hanselmann 3,146,626, Applicants have argued that amended claim 1 defines over Hanselmann, because Hanselmann is directed to a torque converter, and that while the mechanism of Hanselmann appears to have structural similarity to the present claimed invention, the environment of use is much less hostile and that it is apparent from the light weight engineering of the lever arm 6 of Hanselmann that it is simply made of bent sheet metal, and that this design was never intended to be used in an environment such as a turbocharger. These arguments are not persuasive, because the recitation in claim 1, line 1 of a “turbocharger” is not given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). If Applicants amend claim 1 to positively recite the

Art Unit: 3745

turbocharger, the examiner's position is that it would be obvious to use the mechanism of Hanselmann in a turbocharger, because Hanselmann teaches the claimed vane pivoting arrangement, and although in a different environment, states that the invention is not limited to torque converters (column 1, lines 17-20).

Applicants have further argued that the lever arms are preferably resilient to provide a spring effect so that high precision does not need to be met during manufacturing, and that the imprecise manufacturing and free play is not acceptable in the operation of a turbocharger, further demonstrating that Hanselmann has no relevance to the present invention. These arguments are not persuasive because the claims do not recite these features, and these are only directed to alleged benefits of the instant application.

Applicants have not provided specific arguments with regard to the rejection of claim 9 under 35 USC 103(a) as being unpatentable over Hanselmann 3,146,626, other than that claim 9 is allowable by virtue of its dependency on claim 1. The examiner disagrees for the reasons set forth below in the rejection of claim 9 under 35 USC 103(a).

Specification

The abstract of the disclosure is objected to because in line 17, -- the -- should be inserted after "of". Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 1-6, 8-12, 15, and 17-19 are objected to because of the following informalities:

Appropriate correction is required.

In claim 1, line 8, "shaft" should be changed to -- shafts --.

In claim 5, line 23, -- a -- should be inserted after "as".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 8, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by French Patent 1,442,174. Note the turbocharger guiding grid of variable geometry comprising a plurality of guiding vanes 9 arranged around a central axis 1, each vane being connected to a vane shaft 11 pivotal about a pivoting axis near 10, the vane shaft further including a crank part 10, a nozzle ring 5 for supporting the vanes and their vane shafts around the central axis, a unison ring 19 which is pivotable around the central axis relative to the nozzle ring, and a transmission mechanism by which the unison ring is connected to the vanes for pivoting the vanes about their respective pivoting axes, with the crank part 10 having an opening 20 in which a drag lever 16 is slidably guided, during initial assembly of the drag lever to the opening, wherein the drag lever which is pivotably guided on an associated ring 19, and in that the drag

Art Unit: 3745

lever 16 immerses into the opening 20 of the crank part 10 in an approximately radial direction. The drag lever is articulated on the unison ring via elements 26, 27. The drag lever abuts, essentially in all its positions, on the entire length of the inner surface of the opening. As seen in figure 1, a longitudinal axis of each drag lever forms an angle with a radial plane when the vanes are closed, the angle being not equal to 0 degrees, and being about 18 degrees. Note that claims 8 and 17-19 do not require that the vanes be fully closed, and read on the vanes being partially closed as disclosed by the French Patent.

Claims 1-4, 6, 8, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanselmann 3,146,626. Note the guiding grid of variable geometry comprising a plurality of guiding vanes 2 arranged around an unnumbered central axis, each vane being connected to an unnumbered vane shaft (adjacent the base of vane 2) pivotal about an unnumbered pivoting axis, the vane shaft further including a crank part 3, a nozzle ring 11 for supporting the vanes and their vane shafts around the central axis, a unison ring 18 which is pivotable around the central axis relative to the nozzle ring, and a transmission mechanism by which the unison ring is connected to the vanes for pivoting the vanes about their respective pivoting axes, wherein the crank part has an opening 29 in which a drag lever 5 is slidably guided, wherein the drag lever is pivotably guided on an associated ring 18, and in that the drag lever 5 immerses into the opening 29 of the crank part 3 in an approximately radial direction. The drag lever is articulated on the unison ring via element 8. The drag lever has a corned cross section as seen in figures 1 and 2. The drag lever abuts, essentially in all its positions, on the entire length of the inner surface of the opening. The opening 29 of the drag lever is a groove, with the groove facing away from the vanes. Any

Art Unit: 3745

arbitrary radial plane may be drawn, such that a longitudinal axis of each drag lever would form an angle with a radial plane when the vanes are closed, the angle being not equal to 0 degrees.

The recitation in claim 1, line 1 of "turbocharger" has not been given weight because it occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanselmann 3,146,626. Hanselmann discloses a guiding grid of variable geometry substantially as claimed as set forth above, including a drag lever 5 with a cornered rectangular cross section. However, Hanselmann does not disclose that the cross section is generally a square.

The recitation of the cross section of the drag lever being generally a square is deemed to be matter of choice in design. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to select a square shape for the cross section of the drag lever of Hanselmann as an obvious engineering expedient, as opposed to the rectangular cross section disclosed by Hanselmann, because a square cross section and a rectangular cross section are so similar in shape that it would appear the drag lever would perform substantially equally as well with a square shaped cross section as opposed to a rectangular shaped cross section.

Allowable Subject Matter

Claims 7 and 16 are allowed.

Claims 5 and 10-12 contain allowable subject matter; Applicants should correct the informality therein.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3745

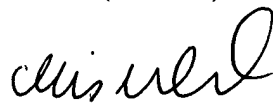
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
July 21, 2005


Christopher Verdier
Primary Examiner
Art Unit 3745